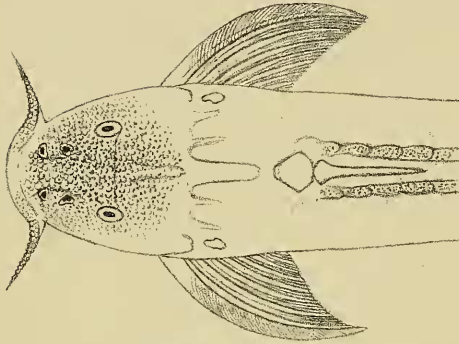
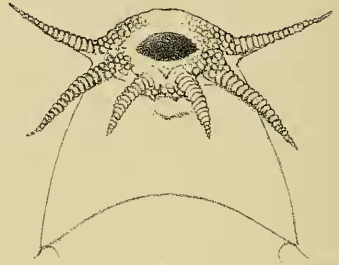


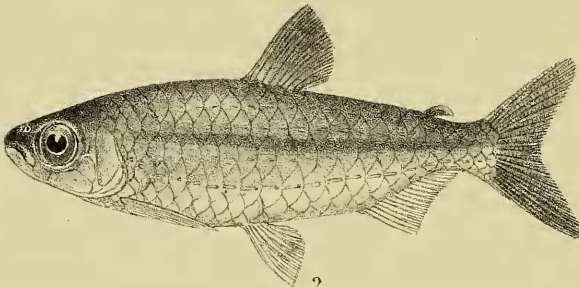
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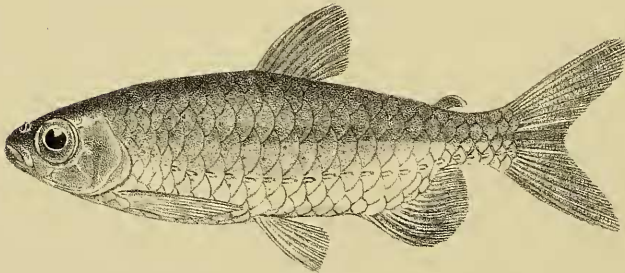
3a.



3b.



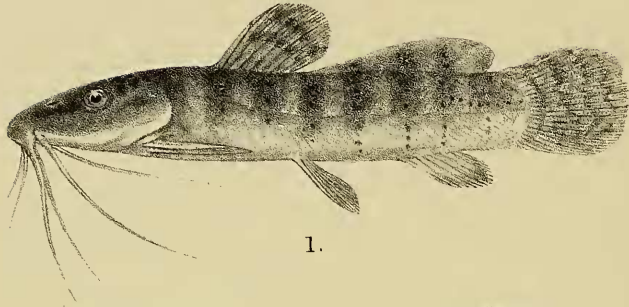
2.



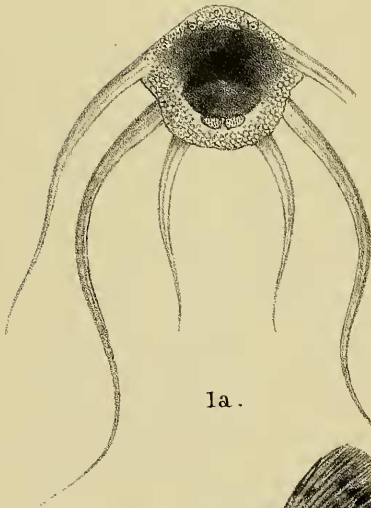
1.



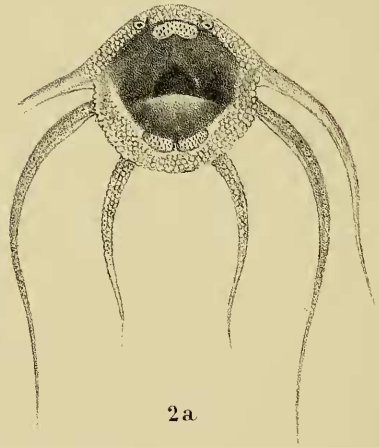
3.



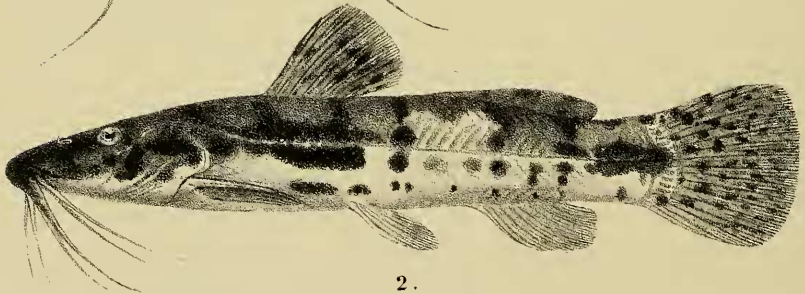
1.



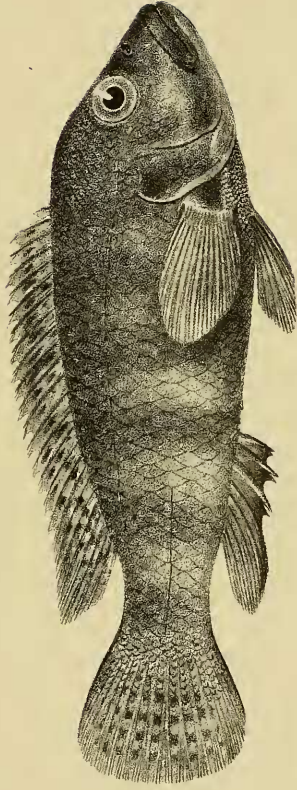
1a.



2a.



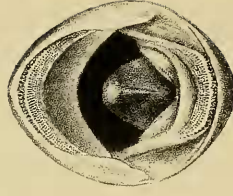
2.



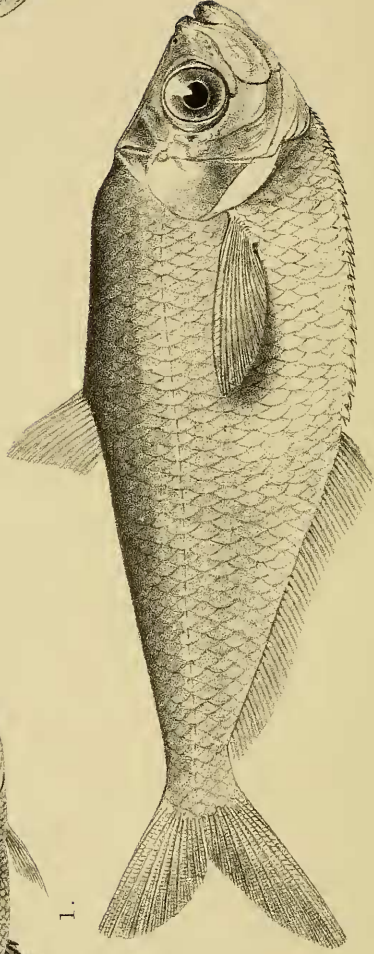
1.



2.



2 a.



3.

- 1. PSEUDOPLESTIODOPS SQUAMICEPS.
- 2. TILAPIA STORMSI.
- 3. PRISTIGASTER DOLLOI.

4. Contributions to the Ichthyology of the Congo.—II. On a Collection of Fishes from the Lindi River. By G. A. BOULENGER, F.R.S.

[Received March 17, 1902.]

(Plates XXVIII.—XXX.<sup>1</sup>)

Among the material which has been most obligingly intrusted to me for study by the Director of the Royal Natural History Museum in Brussels there is a large and important collection of Fishes made by M. Maurice Storms, a cousin of the late Raymond Storms, so well known for his important contributions to pale-ichthyology, in the Lindi River, which flows into the Congo at the Stanley Falls. As the fauna of this river had not previously been explored, it is desirable to give a list of all the species represented in the collection, seven of which are new to science.

#### MORMYRIDÆ.

1. MORMYROPS DELICIOSUS Leach.
2. PETROCEPHALUS SIMUS Sauv.
3. MARCUSENIUS PULVERULENTUS Blgr.
4. STOMATORHINUS HUMILIOR Blgr.
5. MYOMYRUS MACRODON Blgr.
6. GNATHONEMUS MOORII Gthr.
7. GNATHONEMUS ELEPHAS Blgr.
8. GNATHONEMUS RHYNCHOPHORUS Blgr.

#### CHARACINIDÆ.

9. HYDROCYON LINEATUS Blkr.
10. BRYCONÆTHIOPS MICROSTOMA Gthr., var. BOULENGERI, Pellegr.
11. ALESTES GRANDISQUAMIS Blgr.
12. MICRALESTES HUMILIS Blgr.
13. MICRALESTES ALTUS Blgr.
14. MICRALESTES STORMSI, sp. n. (Plate XXVIII. figs. 1 & 2.)

Depth of body  $3\frac{1}{2}$  times in total length, length of head 4 times. Head longer than deep, twice as long as broad; snout shorter than the eye, the diameter of which equals the interorbital width

<sup>1</sup> For explanation of the Plates, see p. 271.

and is contained  $2\frac{2}{3}$  to 3 times in the length of the head; maxillary extending to below anterior border of eye; præmaxillary teeth 16, in two rows, the outer tricuspid, the inner quinquecuspid; mandibular teeth 8 in the outer row, tricuspid. Gill-rakers short, 12 or 13 on lower part of anterior arch. Dorsal II 8, originating above ventrals, at equal distance from the tip of the snout and the root of the caudal,  $1\frac{1}{2}$  as deep as long and about  $\frac{3}{4}$  the length of the head. Adipose fin 2 to 3 times as distant from the rayed dorsal as from the caudal. Anal III 15-16, deeper and with more convex border in the males than in the females. Pectoral longer than the ventral,  $\frac{3}{4}$  or  $\frac{4}{5}$  the length of the head. Caudal forked, with pointed lobes. Caudal peduncle as long as deep. Scales 22-24  $\frac{4\frac{1}{2}}{3\frac{1}{2}}$ , 2 between lateral line and base of ventral. Brownish above, white beneath, with a silvery lateral band.

Total length 75 millim.

Numerous specimens.

15. *DISTICHODUS FASCIOLATUS* Blgr.

16. *DISTICHODUS SEXFASCIATUS* Blgr.

17. *NANNOCHARAX FASCIATUS* Gthr.

18. *NANNOCHARAX ELONGATUS* Blgr.

19. *NANNOCHARAX TÆNIA* Blgr.

#### CYPRINIDÆ.

20. *LABEO GREENII* Blgr.

21. *LABEO PARVUS* Blgr.

22. *BARBUS KESSLERI* Sdr.

23. *BARBUS HUMERALIS* Blgr.

24. *BARILIUS UBANGENSIS* Pellegr.

*B. fasciolatus* Blgr. is identical with this species. The fascicle of the *Bulletin du Muséum* containing Dr. Pellegrin's description was not received in London until March 3rd of this year, after my description had gone to press in the *Ann. Mus. Congo, Zool.* ii. p. 34 (March 1902).

25. *CHELETHIOPS ELONGATUS* Blgr.

#### SILURIDÆ.

26. *CLARIAS ANGOLENSIS* Sdr.

27. *CLARIAS BYTHIPOGON* Sauv.

28. *EUTROPIUS CONGOLENSIS* Leach.



29. *AUCHENOGLANIS PUNCTATUS*, sp. n. (Plate XXIX. figs. 1, 1a.)

Depth of body 5 times in total length, length of head 3 times. Head smooth,  $1\frac{1}{3}$  as long as broad; snout pointed, half the length of the head; diameter of eye 6 times in the length of the head, hardly twice in the interocular width; width of mouth more than half that of the head; lips wide, papillose; posterior nostril cleft-like, a little nearer the eye than the end of the snout; præmaxillary teeth forming a short and narrow band, the mandibulars two rounded groups; maxillary barbel as long as the head, reaching the middle of the pectoral spine; outer mandibular barbel  $1\frac{1}{3}$  the length of the head, inner  $\frac{1}{2}$  the length of the head; gill-membranes forming an obtuse angle; occipital process small, as long as the eye, separated from the interneural shield, which is very small. Humeral process small, pointed. Dorsal I 7; spine smooth,  $\frac{2}{5}$  the length of the head. Adipose fin 4 times as long as deep, nearly reaching the caudal, narrowly separated from the rayed dorsal. Pectoral spine half as long as the head, its inner edge strongly serrated. Ventral not reaching the anal. Latter with 10 rays, 7 of which are branched. Caudal rounded. Pale brownish, with seven indistinct darker bars, each accompanied by a vertical series of black dots; belly white; dorsal and caudal fins with transverse series of dark spots.

Total length 80 millim.

A single specimen.

Allied to *A. ubangensis* Blgr. Differing principally in the longer maxillary barbel.

30. *AUCHENOGLANIS PULCHER*, sp. n. (Plate XXIX. figs. 2, 2a.)

Depth of body 5 to  $5\frac{1}{2}$  times in total length, length of head 3 to  $3\frac{1}{2}$  times. Head smooth,  $1\frac{1}{2}$  as long as broad; snout obtusely pointed, half the length of the head; diameter of eye 7 to 9 times in length of head, twice to twice and a half in the interorbital width; width of mouth rather more than half that of the head; lips wide, papillose; posterior nostril cleft-like, a little nearer the eye than the end of the snout; præmaxillary teeth forming a reniform group, the mandibulars two rounded groups; maxillary barbel  $\frac{2}{3}$  to  $\frac{3}{4}$  the length of the head, not extending beyond the base of the pectoral; outer mandibular barbel nearly as long as the head, inner nearly half the length of the head; gill-membranes forming an acute angle; occipital process small, as long as the eye, separated from the interneural shield, which is very small. Humeral process small, pointed. Dorsal I 7; spine smooth, half the length of the head. Adipose fin 4 to 5 times as long as deep, twice to twice and a half as long as its distance from the rayed dorsal. Pectoral spine half as long as the head, its inner edge strongly serrated. Ventral not reaching the anal. Latter with 11 or 12 rays, 7 or 8 of which are branched. Caudal rounded. Caudal peduncle as long as deep. Yellowish, brown on the back, with transverse series of round black spots; a large black blotch

on each side below the dorsal fin; belly white; dorsal and caudal fins with round black spots.

Total length 100 millim.

Several specimens.

Distinguished from the preceding species and from *A. ubangensis* by the smaller eye; from the former by the shorter, from the latter by the longer maxillary barbel.

31. *AMPHILIUS*<sup>1</sup> *BREVIS*, sp. n. (Plate XXIX. fig. 3.)

Depth of body 6 to  $6\frac{1}{2}$  times in total length, length of head  $3\frac{2}{3}$  to  $3\frac{3}{4}$  times. Head much depressed, a little longer than broad; snout broadly rounded,  $\frac{1}{3}$  the length of the head; eye very small, 9 or 10 times in length of head,  $2\frac{1}{2}$  or 3 times in interocular width; maxillary barbel  $\frac{2}{3}$  or  $\frac{3}{4}$  length of head, scarcely longer than the outer mandibular, inner mandibular about  $\frac{1}{3}$  length of head. Dorsal I 6, equally distant from the end of the snout and the root of the caudal; adipose fin once and a half to twice as long as the rayed dorsal,  $1\frac{1}{3}$  to  $1\frac{1}{2}$  as long as its distance from the latter. Pectoral longer than the ventral,  $\frac{2}{3}$  the length of the head. Anal II 6. Caudal feebly emarginate. Caudal peduncle as long as deep. Brown above, dotted with black; belly white; caudal peduncle blackish towards the base of the caudal; fins white, caudal with a large rhomboidal or cruciform black marking.

Total length 48 millim.

Two specimens.

This species is most nearly related to *A. platycheir* Gthr., which differs, among other points, in having the dorsal fin nearer the end of the snout than the caudal, and the caudal peduncle longer than deep.

32. *SYNODONTIS GRESHOFFI* Schilth.

33. *SYNODONTIS PLEUROPS* Blgr.

34. *SYNODONTIS DECORUS* Blgr.

35. *EUCHILICHTHYS ROYAUXI* Blgr.

36. *PHRACTURA LINDICA*, sp. n. (Plate XXVIII. figs. 3, 3 a, 3 b.)

Depth of body  $7\frac{1}{2}$  to 8 times in total length, length of head 5 to  $5\frac{1}{2}$  times. Head  $1\frac{1}{3}$  to  $1\frac{2}{3}$  as long as broad, nearly smooth above, covered with papillose skin; snout half length of head, obtusely pointed, projecting but slightly beyond the mouth; space between the two nostrils at equal distance from the end of the snout and from the eye, or a little nearer the latter; eye superolateral, its diameter 6 to 7 times in length of head, twice in interocular width; barbels thick and papillose, annulate, maxillary  $\frac{1}{2}$  length of head, outer mandibular  $\frac{1}{3}$ , inner mandibular  $\frac{1}{4}$ ; occipital process narrow, 4 times as long as broad, narrowly separated

<sup>1</sup> *Amphilius* Gthr. 1864, = *Anoplopterus* Pfeff.

from the small interneural shield. Dorsal I 6, first ray longest, slightly longer than the head; second dorsal very small, originating above last rays of anal, its posterior rays adnate to the back through a transparent membrane. Anal II 7-8. Pectoral a little longer than head, reaching, or not quite reaching base of ventral; latter a little shorter, reaching anal; outer ray of pectoral and ventral much thickened. Caudal with crescentic notch. Caudal peduncle much depressed,  $\frac{2}{7}$  to  $\frac{1}{3}$  total length. 23 or 24 dorsal and 18 or 19 ventral scales, of which 8 or 9 are on the caudal peduncle, the last 5 united round the latter. Yellowish brown above, speckled with darker and with four more or less distinct broad dark cross-bands; fins whitish, with brown spots forming bars across the pectorals and ventrals.

Total length 82 millim.

Four specimens.

The genus *Phractura* Blgr. was represented by three species: *P. bovei* Perugia, from the Lower Congo, of which I have lately examined three specimens belonging to the Brussels Museum; *P. scaphirhynchura* Vaill., known from two specimens from the Alima, Upper Congo; and *P. ansorgii* Blgr., recently described in these 'Proceedings' from a single example discovered by Dr. Ansonge in Southern Nigeria. The four species now known may be distinguished by means of the following synopsis:—

- |   |                                     |
|---|-------------------------------------|
| I. Occipital process not reaching interneural shield; snout about half length of head.  |                                     |
| Head feebly rugose above; posterior nostril nearly as distant from the eye as the anterior from the end of the snout; diameter of eye 10 or 11 times in length of head, $2\frac{1}{2}$ or 3 times in interocular width; maxillary barbel $\frac{2}{3}$ length of head ..... | 1. <i>P. bovei</i> Perugia.         |
| Head smooth above; posterior nostril nearly as distant from the eye as the anterior from the end of the snout; diameter of eye 6 or 7 times in length of head, twice in interocular width; maxillary barbel $\frac{1}{2}$ length of head ...                                | 2. <i>P. lindica</i> Blgr.          |
| Head rugose above, with strong ridges; posterior nostril very near the eye, the diameter of which is 7 times in length of head and $1\frac{3}{4}$ in interocular width; maxillary barbel $\frac{1}{2}$ length of head .....   | 3. <i>P. ansorgii</i> Blgr.         |
| II. Occipital process in contact with interneural shield; snout more than half length of head; eye 7 times in length of head, $1\frac{1}{2}$ in interocular width; maxillary barbel $\frac{1}{4}$ length of head .....  | 4. <i>P. scaphirhynchura</i> Vaill. |

#### CYPRINODONTIDÆ.

##### 37. HAPLOCHILUS SINGA Blgr.

#### ANABANTIDÆ.

##### 38. ANABAS MACULATUS Thomin.



## CICHLIDÆ.

## 39. HEMICHROMIS FASCIATUS Peters.

## 40. PSEUDOPLESIOPS SQUAMICEPS, sp. n. (Plate XXX. fig. 1.)

Depth of body  $3\frac{1}{2}$  times in total length, length of head 3 times. Upper profile of head curved; snout a little longer than the diameter of the eye, which is contained  $3\frac{1}{2}$  times in the length of the head and equals the interorbital width; mouth with broad, thick lips, extending to below anterior border of eye; 3 series of teeth in the upper jaw; occiput and sides of head with large scales; 2 or 3 series of scales on the cheek. 8 gill-rakers on lower part of anterior arch. Dorsal XVII 8; spines subequal from the sixth, barely one third length of head; longest soft rays two thirds length of head. Anal III 6; third spine longer than dorsals, two fifths length of head; soft rays like dorsals. Pectoral about two thirds the length of the head. Ventral about the same length, not reaching the vent. Caudal rounded. Caudal peduncle as long as deep. Scales cycloid, 29 in a longitudinal, 13 or 14 in a transverse series; upper lateral line on 8 or 9 scales, forming an interrupted series, lower on 3 or 4. Pale brownish above, white beneath; a dark horizontal streak on each side of the head, behind the eye; soft dorsal, anal, and caudal fins with numerous transverse series of small dark spots.

Total length 65 millim.

Two specimens.

Distinguished from *P. nudiceps* by the scales on the head, the shorter dorsal spines, and the interrupted lateral lines.

## 41. TILAPIA STORMSI, sp. n. (Plate XXX. figs. 2, 2a.)

Teeth in 4 to 7 series, outer deeply notched, inner much smaller and tricuspid; 36 to 60 teeth in the outer præmaxillary series. Depth of body equal to length of head, 3 to  $3\frac{1}{4}$  times in total length. Snout rather pointed, with straight or slightly convex upper profile,  $1\frac{1}{3}$  to  $1\frac{2}{3}$  the diameter of the eye, which is contained 4 to  $4\frac{1}{2}$  times in the length of the head and equals the interorbital width; width of mouth about  $\frac{2}{3}$  that of the head; maxillary extending to between nostril and eye; 3 or 4 series of scales on the cheek; large scales on the opercle. Gill-rakers short, some anvil-shaped, 11 or 12 on lower part of anterior arch. Dorsal XVI-XVII 9; last spine longest, about  $\frac{2}{5}$  the length of the head, about  $\frac{2}{3}$  the longest soft rays. Pectoral rounded, about  $\frac{2}{3}$  the length of the head, widely separated from the anal. Ventral not reaching the vent. Anal III 7; third spine about  $\frac{1}{3}$  the length of the head. Caudal rounded. Caudal peduncle as long as deep. Scales with strong marginal denticulation, 30-31  $\frac{2\frac{1}{2}-3}{16-17}$ ; lateral line  $\frac{21-23}{6-11}$ ; scales on the occiput and nape very small. Olive-brown above, some of the scales black at the base; 5 or 6 more or less indistinct dark cross-bands; a blackish

opercular spot; dorsal and caudal fins with small dark spots; a fine blackish edge to the caudal above and beneath.

Total length 102 millim.

Five specimens.

Allied to *T. fasciata* Perugia.

#### Appendix.

In a series of specimens from other parts of the Congo State, belonging also to the Brussels Museum, the representative of a new species of a marine Clupeid genus was found, which I have great pleasure in naming after my friend and colleague M. L. Dollo.

#### PRISTIGASTER DOLLOI, sp. n. (Plate XXX. fig. 3.)

Closely allied to *P. cayanus* Cuv., but abdominal profile much less convex. Depth of body 3 times in total length, length of head 4 times. Eye longer than the snout, shorter than the post-ocular part of the head; maxillary extending to below the centre of the eye. Gill-rakers long, 25 on lower part of anterior arch. Dorsal 15, equally distant from the end of the snout and the root of the caudal. Anal 46, originating below the middle of the dorsal. Pectoral nearly as long as the head. Caudal deeply forked. Caudal peduncle as long as deep. About 40 scales in a longitudinal series. Ventral serration formed of 32 spinose scutes. Uniform silvery.

Total length 120 millim.

A single specimen from Banana.

#### EXPLANATION OF THE PLATES.

##### PLATE XXVIII.

- Fig. 1. *Micralestes stormsi*, male, p. 265.  
 2. " " female.  
 3. *Phractura lindica*, p. 268.  
 3 a. " " Upper view of head and anterior part of body,  $\times 2$ .  
 3 b. " " Lower view of head,  $\times 3$ .

##### PLATE XXIX.

- Fig. 1. *Auchenoglanis punctatus*, p. 267.  
 1 a. " " Open mouth,  $\times 2$ .  
 2. " *pulcher*, p. 267.  
 2 a. " " Open mouth,  $\times 2$ .  
 3. *Amphilius brevis*, p. 268.

##### PLATE XXX.

- Fig. 1. *Pseudoplesiops squamiceps*, p. 270.  
 2. *Tilapia stormsi*, p. 270.  
 2 a. " " Open mouth,  $\times 2$ .  
 3. *Pristigaster dolloi*, p. 271.